مزنوق في الفارما وعايز تنجز يبقى لازم تاخد

البرشامه

http://twitter.com/GooooTeam

http://www.youtube.com/GoTeamMedical

http://www.facebook.com/Go.Team.Official.Page


بسم الله الرحمن الرحيم

CONTENTS

SUBJECT	PAGE
CNS	1
Chemotherapy	3
ANS	5
Blood	7
Respiration	9
General	10
GIT	11
CVS	12
Autacoids	13
Renal	13
Hormones	14
تجميعات د. أحمد عبد الرحمن	16
Practical	24

Central Nervous System (CNS)

Sheet

Mention side effect of:

- Morphine, Phenytoin, Barbiturate, Daizepam, Chlorpromazine, Indomethacine, Valporic acid,

L— Dopa, Colchicine,

Mention uses of:

- Morphine, Phenytoin, Barbiturate, Daizepam, Chlorpromazine, Bromocriptine, L—Dopa, Colchicine.

Mention treatment of:

- Parkinsonism, Status Epilepticus, Gout, Depression.

Mention contraindication of:

- Morphine, Aspirin, NSAID.

Mention mechanism of:

- Carbidopa, Aspirin, Diazepam, Allopurinol, Barbiturate, Valpoate, Bromocriptine.

Toxicity of:

- Diazepam, Aspirin, Morphine, Barbiturate.

Oral

Why....?

- Morphine relieves any type of pain except itching.
- Morphine contraindicated in bronchial asthma.
- Never give morphine alone in biliary colic.
- Never give morphine in labor pain.

- Aspirin in large dose raises body temperature.
- Aspirin acts as anti inflammatory drug.
- Aspirin in large dose leads to convulsion.

- Hypnosis induced by barbiturates is usually followed by hang over.
- BZ Preferably barbiturate.
- Carbidopa best of L-dopa best of dopamine.
- Xanthine used in headache.
- Don't stop antiepileptic drugs suddenly.

Others

- ttt of petite mal epilepsy.
- Side effects of clonazepam.
- Actions of benzodiazebein.
- Mechanism of actions of benzodiazepines and where their receptors present (postsynaptic).
- Morphine, Aspirin & Barbiturate toxicity.
- Actions of diazepam
- Parkinsonism: cause & treatment in details.
- Adverse effects of Phenytoin.
- What is baby aspirin & its uses?
- What happens if diazepam is given too quickly.
- Heroin acute toxicity.
- Domperidone (What is it? & Compare between it & chlorpromazine)
- Barbiturates toxicity.
- Antidote of diazepam and Antidote of morphine.
- Side effects of Phenytoin.
- Analgesics Def. and mech. of action of one of them.
- Action of morphine.
- Drug therapy of gout.
- Classification of psychotic drugs and explain one of them.
- Characters and treatment of parkinsonism.

► Stages and drugs of general anesthesia

► Classification and mech. of antidepressant

► What is automatism?

► Three drugs producing pin point pupil.

► Hypertensive crisis.

► Drug used in treatment of schizophrenia.

Chemotherapy

Sheet

Give reason

►Sulphadiazine is compined with tri metoprime .

►Quinolone isn't used before 18 years old .

►Calvulanic acid is compined with amoxicillin.

►Amoxicilline may be used in recurrent peptic ulcer.

►Compination of sulphonamide & penicillin decrease their anti microbial effect.

Mechanism of action of :-

►Cortimoxazole.

► Gentamycin .

► Sulphadiazine in UTI & its SE.

Mention the drugs used in treatment of :-

► TB.

►Amoebic hepatitis .

►Ttyphoid fever .

►Rheumatic fever

Other:-

►Uuses of penicillin.

► Cephalosporines .

► Aminoglycosides " gentamycin ".

► Cholramphanicol.

► ttt of t . fever .

► Tetracyclines .

► Quinolones .

►Sulphonamides & its toxicity .

► Co – trimoxazole

.

►Anti TB.

► Rifamp.icin

► Metronidazole.

►Praziquantal .

► Anti malarial .

.

Oral

►-broad spectrum antibiotics

► ايه نديها B-lactamase عندها-bacteria

► grey baby syndrome الـ تنسي اوعي-side effects of chloramphenicol

► members and adverse effects of aminoglicosides

► what causes grey baby symdrome

► what causes ototoxicity other than aminoglicosides

►what is clopidogrel and mechanism

►what is famotidine

►typhoid fever & adverse effect of amoxicillin

►anti malarial drugs

►adverse effects of cephalosporins

►adverse reactions of Quinolones

►penicillin&cephalosporins

AUTONOMIC NERVES SYSTEM (ANS)

Sheet

Sympathetic

1- Adrenaline.
2- Propranolol.
3Treatment of migraine.
4- B-blockers.
5- Ergotamine.
6- Dopamine.
7- Amphetamine.
8- Reserpine.

Parasympathetic

1-Mechanism of action of ant choline esterase

2-therapuetic uses of " " "

3-ttt of organophouspherous toxicity

4-Contraindication of Atropine

5-side effects of atropine

6-therapeutic uses of atropine

7-therapeutic uses of Hyoscine and its contraindications

8-drugs used in the ttt of Glucoma

9-mechanism of action of(Phystogmine-neostigmine) and its uses

Oral

sympathetic

١- ايه انواع ال smooth muscle fibers فى الجسم ؟
٢- انواع ال uptakeايه ؟ طيب الادويه اللى بتشتغل على كل نوع فيهم ؟
٣- ليه امبوله الدرينالين غامقه ؟
٤- ايه تاثير الادرينالين والنورادرينالين على الضغط ؟
٥- ينفع اخد Noradrenaline by Inhalation ؟ وليه ؟
٦- ايه ال precautionsاللى بنعملها واحنا بندى النورادرينالين ؟
٧- ايه الفرق بين ال doputamine & prenalterol ؟

٨- تأثير الدوبامين على الضغط ؟
٩- ليه الـ doputamine used in shock ؟ وبستخدمه كده على طول ولا لازم اعمل حاجه الاول ؟

١٠- ايه الفرق بين تاثير الادرينالين والايفدرين على الضغط والعضلات ومين فيهم اللى بيحصل معاه tachphelaxis ؟
١١- ازاى اعالج الـ amphetamine poisoning ؟
١٢- تعرف ايه عن الـ sulbutamol ؟
١٣- ليه الـ prazosin is powerful VD ؟
١٤- لو راجل ضغطه عالى وعنده القلب اديله ايه ؟ وليه ؟

١٥- ليه بننصح العيان انو ياخد الـ prazosinوهو فى السرير ؟
١٦- قسم الألفا بلوكرز ومين فيهم compitiveومين Non ؟
١٧- يعنى ايه Ergotism ؟
١٨- واحده ولدت وجالها نزيف اديها ايه ؟
١٩- واحده ولدت وباطنها لسه منفوخه اديها ايه ؟
٢٠- ازاى اعالج الـ migraine ؟
٢١- الـ B-blockersبتقلل مجهود القلب ازاى ؟
٢٢- لو حطيت B-blockers مع الادرينالين او الايزوبرينالين ايه اللى يحصل للضغط فى الحالتين ؟
٢٣- ينفع واحد بياخد انسولين ياخد معاه B-blockers ؟ تتصرف ازاى ؟
٢٤- ينفع اوقف الـ لB-blockers مره واحده ؟ ليه ؟ طيب عدلى الادويه اللى ما ينفعش تقف مره واحده ؟
٢٥- ينفع اوطى الضغط ب B-blockers فى عيان بياخد اسبيرن؟
٢٦- قسملى الـ B-blockers وقولى امثله ليها ؟
٢٧- ايه تاثير الـ guanithedineعلى الضغط ؟
٢٨-ايه تأثير الـ MAO Iعلى الـ resepine ؟
٢٩- ايه دوا الضغط اللى ينفع فى الحامل ؟
٣٠- الـ colondine بيشتغل ازاى ؟
٣١- ازاى اعالج الـ anaphylactic shock ؟
٣٢- ليه دلوقتى مش بنستخدم الـ vasopressorsفى علاج الـ shock ؟
٣٣- البيتا بلوكر الي بينشط السيمباثاتيك اسمه ايه وايه استخداماته؟
٣٣- البيتا بلوكر الي بينشط السيمباثاتيك اسمه ايه وايه استخداماته؟
٣٤- ايه الدوا الفعال في علاج الفيوكروموسايتوما؟؟
٣٥- ليه مش بستخدم الجوانيثيدين فى علاج الفيوكروموسيتوما ؟
٣٦- البيتا بلوكر بتعالج نوع وبتسبب نوع من الانجاينا ايه هما ؟ ٣٦-
٣٧-ازاي ممكن أحول الماده الي بترفع الضغط زي النور أدرينالين الى ماده بتوطي الضغط وتقفل السيمباثاتيك؟؟

Parasympathetic

►Classification and action of neuromuscular blockers.

►Defenetion, diagnosis and treatment of myathenia gravis.

►Uses of atropine.

►Physostgmine&neostigmine uses.

Blood

Sheet

Compare:

1- Heparin & Warfarin

2- HMW & LMW heparin

Give Reason:

1- Serfarin dose should be decreased if combined with antibiotic.

2- Pernicious anemia is treated by parenteral vit-B12 rather than oral route.

Enumerate:

1- Drug therapy of hyperlipoproteinemia.

2- Mechanism of drug therapy of hyperlipoproteinemia.

3- Drug ++ & -- potency of oral anti coagulant.

4- Indication of anti coagulant.

5- Anti platelet aggregation.

Write the anti dote of the following:

1- Streptokinase 2- Warfarin 3-Heparin 4- Met-HB 5- Iron toxicity

Other:

1- Therapeutic Uses & Contraindication of: a- Warfarin b- Heparin

2- Mechanism of Clopidogrel in thrombosis.

3- TTT of recent vascular thrombosis.

Oral

١- ليه بنحط بن على الجرح ؟

٢- ازاي أوقف نزيف ؟

٣ - ليه أدي المريض أسبرين في حالات النزيف ؟

٤- ايه ال Mechanism ال الأسبرين بيشتغل بيه ك Anti Coagulant ؟

٥ - ليه ال Anti Platelet بيستخدموه خاصة في Mainly Arterial Thrombus ؟

٦ - ليه ال Anticoagulant بيستخدموه خاصة في Mainly Venous Thrombus ؟

٧- ازاي كلا من dipyridamole & ticlopedine بيشتغل ك anti platelet ؟

٨- ليه ال Warfarin بيشتغل Vivo بس ؟

٩- ليه ال Heparin بيشتغل Vivo & Vitro ؟

١٠- ليه مينفعش أستخدم Ca Oxalate في بنوك الدم ؟

١١- ليه لازم أعمل Control of the Dose لما أستخدم Anticoagulant ؟

١٢- Estrogen على الرغم من انه HME Inhibitor بس هو بيقلل عمل ال Oral Anticoagulant ؟

١٣- Hyperthyroidism بيزود نشاط ال Oral Anticoagulant ؟

١٤- ليه بيستخدم Heparin & Warfarin في علاج الجلطة ؟

١٥- ليه بستخدم S.D. Heparin بعد العمليات وميتفعش أستخدمه ب L.D. ؟

١٦- ليه الاتنين دول مينفعش أستخدمهم مع بعض HMG CoA Reductase & Fibrates ؟

Respiration

Sheet

Mechanism:

1-Bromohexine.

2-Carboxymethylcystiene.

3-Saline expectorant.

4-Neasuant.

5-Alkaline expectorant.

ENUMERATE

1-Drugs used in ttt of productive & dry cough.

2-Expectorants.

3-Uses of lactulose.

GIVE REASON OR ORAL?

►Aspirin is # in B.A.

►saline expectorant is # in TB.

►saline expectorant is # in thyrotoxicosis unde control of K PERCHLORATE.

Oral

- Saline expectorant (mechanism & why they are C.I in pulmonary T.B) & mention another drug is also C.I in T.B.
- Drugs are C.I in B.asthma (mention & why).
- Antitussives are C.I in useful cough (why).
- Salmeterol & formeterol are not used in acute B.asthma (why).
- ليه أدوية الكحة مسكرة ؟

General

Sheet

- Up-down regulation of receptor
- Enzyme inducer & enzyme inhibition
- Drug dependence & tolerance (def , types, mechanism)
- Volume of distribution
- Iatrogenic & tratogenic drugs & idiosyncrasy (def , examples)
- Factor affecting drug excretion
- Phase 1 _ 2 in drug metabolism
- Drug habituation _ addiction
- Antagonism
- Zero order kinetic.

Oral

* فائدة Volume of distribution؟

*block of receptors (competitive _non competitive)

*ازاى تحسب جرعة الدواء لطفل وهل بتختلف من سنة لسنتين؟

*هل كل الادويه لما يحصل لها metabolism بتكون inactive ؟

*ايه الفرق بين hyper , super sensitivity ؟

GIT

Sheet

- Therapeutic uses of ranitidine .
- Therapeutic uses of cimetidine .
- Therapeutic uses of lactulose .
- Anti emetics .
- Drugs used in treatment of peptic ulcer .
- Drugs used in treatment of constipation .
- Side effects of cimetidine .

Oral

- Vomiting due to motion sickness.
- Drugs of peptic ulcer.
- Mention contraindication of:
- Treatment of diarrhea.
- Drugs contraindicated in peptic ulcer.
- Antacid drugs & side effect of AL (OH) 3.
- Emetine.

CVS

Sheet

Mention side effect of:

- Nitrates, Quinidine

Mention uses of:

- Nitrates, Digitalis

Mention treatment of:

- Heart Failure

Mention contraindication of:

- Digitalis

Mention mechanism of:

- Nitrates in the treatment of angina, CCBs, verapamil & nifedipine, anti hypertensive effect of diuretics.

Toxicity of:

Digitalis

Oral

Why….?

- Nifedipine contraindicated in arrythmia
- Why digitalis should be given before Quinidine?

Others

- ► Anti-anginal combinations
- ► Classifications of anti-hypertensive drugs
- ► Discuss Na nitroprusside
- ► Discuss captoprill Classification of anti-arrythmic drugs
- ► Quinidine
- ► Pharmcological action of digitalis

Autacoids

Sheet

- Montelukast (pharmacological effect & how can be used in B.asthma .
- Therapeutic uses of cimetidine .
- Mechanisim of action of dimenhydrinat .
- Mechanisim of action of serotonin .
- Hishtamine (mechanisim of action & therapeutic uses)

Oral

- First generation of antihistaminic should not be used by drivers or in the morning (why)
- Cyproheptadine is broad spectrum antagonist (why) &mentions its therapeutic uses.
- Explain triphasic blood pr response of serotonin & mention another drug has the same effect on blood pr. .

Renal

Sheet

1-factors affecting renal excretion of drugs .

2-contraindication of thiazide .

3-mechanisim of action & therapeutic uses of thiazides biuretic .

4-uses of loop diuretics .

5-side effects of frusimide .

6-contraindication of frusimides .

7-therapeutic uses of frusimides .

8-how does frusimide affect ascending loop of henle pharmacological .

Oral

- Thiazide not lasix is used in osteoporosis (why)?
- Explain feminizing effect (gynecomastia) of spironolactone.
- Why is not NH4CL used in chronic oedema?
- Diamox (acetazolamide) is self limiting (why)?
- Why are frusemide & thiazide C.I with Digitalis ?
- Which type of diabetes insipidus is treated by diuretic & what is this diuretic?
- Men on 2diure cs not C.I in gout & why ?
- Why frusemide not thiazide is useful in acute pulmonary oedema & why thiazide not ?
- Asprin is C.I with thiazide when treating hypertension & with lasix in oedema why ?
- Mannitol not used orally why & why is it used as diuretic ?

Hormones

Sheet

- Mechanism of action of thyroid hormones .
- Give an account on thioamides .
- Mention actions of thiamides .
- Side effects & toxicity of thioamides .
- Therapeutic uses of iodides .
- Side effects of radio active iodides .
- Treatment of hyperthyrodisim .
- Mechanisim of action of insulin .
- Actions of insulin .

Oral

1-NO need for NaHco3 when correc on of hyperosmolar coma (explain).
2- Why is oral hypoglycemic not effective in type 1 diabetes?
3- Propylthiouracil must be stopped about 10 days before surgery (why) & which drug replaces it?
4-level of Ca in osteoporosis with thyroid differs from its level in osteoporosis with cortical (HOW & WHY)?
5- MENNTION one drug acts as antagonist against sex hormones & side effects.
6- Fate of oral contraceptive therapy after break through bleeding or minimal spotting &why does these bleeding occur?
7- Mention antifungal drug used as antisteroid & what is the mechanism?
8- Mention steps of thyroxin synthesis & every drug inhibits each step.
9-mechanism of action of Acarbose & Glitazones & to which groups of drugs they belong?
10- Disaffirm like action is side effect for one antidiabetic drug (what is the drug & mention two other drugs have the same side effect & to which groups of drugs they belong?)

Drugs acting by enzyme inhibition:

1-α-methyldopa : inhibits dopa-decarboxylase enzyme
(Used in treatment of hypertension, it is the drug of choice in hypertension during pregnancy).

2-Anti-cholinesterase: either reversible as physostigmine and neostigmine, or irreversible as organophosphorous compounds.

3-Glucocorticoids (cortisone): inhibits phospholipase A_2.

4-NSAIDs e.g. Aspirin, phenylbutazone, Diclofenac....., inhibit cyclooxygenase enzymes (COX).

5-Zileuton: inhibits 5-lipooxygenase enzyme ⟶ ↓ leukotriene synthesis, used in prophylaxis of bronchial asthma.

6-Dazoxiben: Antiplatelet by inhibition of thromboxane A_2 synthase (same mechanism as aspirin as antiplatelet).

7-Methylxanthines e.g. theophylline and aminophylline, inhibit P.D.E (phosphodiesterase) type IV (4) ⟶ ↑ c-AMP ⟶ CNS stimulation, cardiac stimulation, V.D. and bronchodilation.

8-Disodium cromoglycate and Nedocromil sodium: (mast cell stabilizers)
Used in prophylaxis of bronchial asthma, given by inhalation, inhibit P.D.E in mast cell.

9-Warfarin: "oral anticoagulant", inhibits vitamin k reductase ⟶
↓ Synthesis of prothrombin ii (2) and other coagulation factors (vii,ix,x).

10-Dipyridamole: Antiplatelet, ↓ PDE ⟶ ↑ c-AMP.

11-pentoxyphylline: methylxanthine, antiplatelet, as dipyridamole.

12-Statins: antihyperlipidaemics, ↓ HMG.COA reductase enzyme.

13-Carbonic anhydrase inhibitors: e.g. acetazolamide (diamox) used as diuretic (self-limiting), ↓ IOP in glaucoma, treatment of petit-mal epilepsy, as alkalinizer of urine.

14-Angiotensin converting enzyme (ACE) inhibitors: e.g. captopril, lisinopril, enalopril, used in treatment of hypertension (drugs of choice in hypertension + diabetes mellitus), and in congestive heart failure.

15-Digitalis (cardiac glycosides): inhibit Na^+/K^+ ATPase (Na^+ pump), used in treatment of heart failure.

16-Bipyridines: e.g. amrinone, milrinone, eroximore, inhibit P.D.E type iii (3) , used in resistant heart failure as short term therapy.

17-Proton pump inhibitors: e.g. dmeprazole, lansoprazole. Inhibit H^+/K^+ ATPase (proton pump) in partial cells, used as antisecretory (↓ HCl) in treatment of peptic ulcer.

18-Allopurinol: xanthine oxidase inhibitors, ↓ uric acid synthesis in prophylaxis of gout.

19- MAO Inhibitors.
20-peripheral dopa-decarboxylase inhibitors (PDDI) e.g. carbidopa and beuserazide, combined with L-dopa in treatment of Parkinsonism.
21- COMT-Inhibitors: tolcapone and entacapone, given with L-dopa/carbidopa in treatment of Parkinsonism.
22-Sodium valproate and vigabartin: Inhibit GABA transaminase, used in epilepsy (broad-spectrum anti epileptics).
23-β-lactamase inhibitors: e.g. clavulanic acid, sulbactum and tazobactam, combined with penicillin to treat β-lactamase producing bacteria e.g. staph.
24-Cilastatin: inhibits dipeptidase enzyme in renal cells to inhibit metabolism of imipenem into nephrototic metabolite (imipenem + cilastatin = tienam).
25-sulphonamides: inhibit dihydropteroate enzyme → ↓ synthesis of dihydrofolic acid from PAPA by bacteria.
26-Trimethoprim
27-pyrimethamine
28-proguanil:

29-Methotrexate: anticancer, inhibits dihydrofolate reductase, causes megaloblastic anemia, treated by folinic acid (=leukovorin).
30-Rifampicin: inhibits DNA-dependent RNA polymerase.
31-Quinolones and fluroquinolones: inhibits DNA-gyrase.
32-Acyclovir: Antiviral inhibits DNA polymerase.
33-Zidovudine: Antiviral, used in treatment of AIDS, inhibits reverse transcriptase enzyme.

Drugs that inhibit phosphodiesterase enzymes (P.D.E Inhibitors) :

1. Selective α_1-blockers (e.g. *prazosin* , they do not cause reflex tachycardia as they increase cAMP & cGMP)
2. Bipyridines (*Amrinone* , *Milrinone* , *Enoximone*) :Inhibit PDE III (3)
3. Methyl Xanthines (*Aminophylline* , *caffeine* , *theophylline* , *theobromine*): Inhibit PDE IV (4)
4. *Sildenafil* (Viagra) , *Tadafil* , *Valdenafil* used in erectile dysfunction : Inhibit PDE V (5)
5. *Dipyridamole* : anti platelet

Drugs causing Hepatotoxicity:

1. α-methyl dopa(α2-agonist-antiadrenergic-used in treatment of hypertension, is the drug of choice in hypertension during pregnancy).
2. Dantrole (direct skeletal muscle relaxant, ↓Ca release from sarcoplasmic reticulum, life-saving in malignant hyperthermia and neuroleptic malignant

syndrome , given I.V).

3. Statins e.g; simvatatin (anti-hyperlipidemics).
4. Fibrates e.g; clofibrate (anti-hyperlipidemic).
5. Toxic doses of paracetamol (or if given with HME inhibitors as alcohol and phenobarbitone) due to accumulation of NABQI.
6. Colchicine (anti-inflammatory in gout).
7. Tolcapone(COMT-inhibitor used in parkinsonism with L-dopa).
8. Phenytoin(anti-epileptic+anti-arrhythmic).
9. Oxazolidinediones(anti-epileptic in petit-mal epilepsy).
10. Sodium Valproate (broad-spectrum antiepileptic).
11. MAO-inhibitors (anti-depressants).
12. Halothane (inhaled general anaesthetic).
13. Tetracyclines(antibiotics).
14. Sulphonamides(anti-bacterial).
15. Isoniazid.
16. Pyrazinamide.
17. Ethionamide.
18. Para-amino-salicylic acid.
19. Ketoconazole.
20. Griseofulvin.
21. Cis-platin (anti-cancer).

Drugs causing Diarrhea:

1-Parasympathomietics: e.g Carbachol – Bethanecol -Neostigmine
(Stimulate M Receptors in Small Intestine)
2-Adrenergic Neurone Depressants : e.gGuanethidine –Reserpine
(They causes Parasympathetic Predominance)
3-Dantrolene which is direct skeletal muscle Relaxant
4- Oral Iron : e.g Ferrous Fermanate & Gluconate ,May cause black or bloody diarrhea
(Some oral iron causes constipation)
5-Magansium Oxide –Hydroxide –Trisilicate :used as Chemical antacids
6-Metoclopramide : Antemitic & Prokinitic
7-Domperidone: Antiemitic & Prokinitic
8-Purgatives (chemical & physical)
9-Colchicine : used in Acute gouty anthritis, may causes bloody diarrhea
10- Erthromycin : Anthmicrobial (Diarrhea is due to prokinietic
11-Broad Spectrum Antimicrobials (especially if not completely absorbed)
e.g Ampicillin –Tetraglclines- Chloramphenicol –Cophalosporins
(Due to Superinfection)
12-PG-Analogues :e.g Misoprostol (see Peptic ulcer)

Drugs Causing Bradycardia:

1-β-blocker: e.g Propranolol ,Nadolol , Atenolol …..etc
2-Parasympathomimetics (Muscrinic Agonists):e.g Methocholidine ,Carbachol ,…
3-Digitalis (The Earlist manifestion of toxicity are nausea & vomiting +Bradycardia below 60 beats /min)
4- α_1 -Agonists causes reflex Bradycardia (α_1 stimulation ➔V.C ➔ increase B.P ➔reflex bradycardia through baro receptors action)
5-General Anasthesia :e.g Halthone due to increase vagal tone
6-Some calcium channel blockers :e.g Verapamil (due to Blocking Voltage-gated Ca channels in heart)

Drugs used in treatment of PVD :

1. a_1-blockers (except *ergotamine , ergotoxine , dihydroergotamine , yohimbine*)
2. β_2-Agonists (e.g. *Nylidrin , isoxsuprine*)
3. M_3-Agonists = parasympathomimetics (e.g. *Methacholine*)
4. Calcium channel blockers e.g. *Nifidipine*
5. PGI_2 : *Epoprostenol*
6. *Dihydroergotoxine* (the only ergot alkaloid useful in PVD)

Drugs contraindicated in PVD :

1. a_1-Agonists
2. Ergot alkaloids (*except dihydroergotoxine*)
3. Non selective β-blockers

Drugs used in treatment of paroxysmal atrial tachycardia (PAT) :

1. β-blockers
2. M_2-Agonists (e.g *Methacholine , Edrophonium , Neostigmine*)
3. *Digitalis* (cardiac glycosides)

4. Anti Arrhythmic drugs : *quinidine* , Ca^{2+}-channel blockers (e.g. *verapamil*)
5. a_1-Agonists: e.g. Noradrenaline , phenylepherine , Methoxamine (causes reflex bradycardia following elevation of blood pressure & contraindicated in hypertensive patients)

Drugs cuasing Tachycardia:

1- B1-agonists : e.g. Adrenaline , Isoprenaline , Ephedrine
2-B2- agonist : e.g. Salbutamol , Ritodrine
B2-stimulation lead to :V.D :dcrease B.P :reflex tachycardia &may be due to B1 stimulation by large doses because Selectivity is not absolute
3-Atropine(antimuscarinic =parasympatholitic) , note that atropine may Cause initial bradycardia due to block of presynaptic M-receptors that cause increasing release of acetylcholine or due to stimulation of C.I.C
4-Methylxanthines : e.g. Aminophylline , theophylline , by inhibition of P.D.E type 4 & increase C-AMP
5-Arteriodialators : e.g. nifedipine (and other dihydropyridine Ca2+ Chanel blockers) , hydralazine , minoxidil , (nitrates are mainly Venodilatores but may cause arteriodilatation) . Arteriodialators Cause reflex tachycardia
6-Glucagon hormone (increase C-AMP by stimulation of adenylcyclase)
7-Alpha 1-blockers : e.g. phentolamine , phenoxybentamine , they cause reflex tachycardia due to arteriodilatation , note that selective alpha1-blockers as prazosin cause no (or minimal) tachycardia.
8-Ganglion blockers : e.g. Trimethaphan

Drugs causing Convulsions (Seizures):

1-CNS stimulants: a-Methylxanthines (Theophylline)
b-Amphetamine
c-Cocaine
d- Atropine
e-Araleptics (brain stem stimulants)
f- Strychnine (spinal cord stimulant)
2- Morphine (by decrease release of GABA)
3-Meperidine (metabolized into normeperidine +atropine like action)
4-Aspirin (acute toxicity) due to increase Glutamate /GABA ratio

5-Chlorpromazine (major tranquilizer = Antipsychotic = Neuroleptic)
6-MAO-inhibitors
7-Lithium (anti-manic, mood stabilizer in bipolar disorders)
8-Penicillins (if large dose or intrathecal injection)
9-Carapenem e.g. Imipenem (B-lactam antibiotics)
10-Cycloserine (antibacterial _ inhibits cell wall synthesis)
11-Fluoroquinolones especially with NSAIDS &theophyllin
12-Amphotericin B (polyere –antifungal)
13-Oxamniquine (Anti bilharzial)
14-Cardiac glycosides

Drugs causing psychosis:

1-D2-Agonist e.g. L-dopa , bromocriptine (antiparkinsonian drugs)
2-Indomethacin (NSAID)
3-Glucocorticoides
4-Cycloserine
5-Cardiac glycosides

Drugs causing Depression:

1- Estrogen (oral contraceptives)
2-Reserpine (adrenergic neurone depressant, depletes the brain from monoamins :5HT , noradrenaline &dopamine)
3- Alpha –methyldopa (decrease synthesis of monoamines by decrease dopa decarboxylone)
4-Chlorpromozine (causes pseudo-depression)

Drugs causing Nephrotoxicity

1-**NSAIDs** except paracetamol(cause "**analgesic nephropathy**" due to renal V.C. by ↓ PGE and PGI synthesis.

2-**Colchicine**(+ hematuria).
3-**Gold salts**(in treatment of **rheumatoid arthritis**).
4-**Vancomycin**.
5-**Aminoglycosides**.
6-Cephalosporins.
7-**Methicillin**.
8-**Sulphonamides**.

9-**Tetracyclines**(especially of expired = Fanconi syndrome).
10-**Amphotericin B** (Anti-fungal).
11-**Acyclovir**(Anti-viral).
12-**Demeclocycline**(Anti-bacterial tetracycline).
13-**Lithium**(Anti-manic + mood stabilizer).
14-**Methoxyflurane**(inhald general anaesthesia as halothane).

Teratogenic drugs:

1-**NSAIDs** except paracetamol(Aspirin causes cardiac septal defect,but is the safest NSAID).
2-**Benzodiazepines**.
3-**Barbiturates**.
4-**Chlorpromazine(**phenothiazine antipsychotic and anti emetic).
5-**Lithium**.
6-**ACE-inhibitors** e.g. Captopril.
7- **AT1_(Angiotersin) receptor-antagonists** e.g. Losartan.
8-**Antihistaminics** e.g. Cyclizine and Meclizine.
9-**Oral anticoagulants** e.g. Warfarin.
10-**Thiazide and Loop diuretics**.
11-**Phenytoin**. :
12-**carbamazepine**.
13- **Sodium valproate:** antiepileptic,causes spina bifida.
14-**Nitrous oxide**(inhaled gas general anesthetic).
15-**Sodium nitroptusside**(mixed vasodilators given I.V. infusion)
16-**Aminoglycosides**→fetal deafness.
17-**Tetracyclines**.
18-**Sulphonamides**→hyperbilirubinemia and kernicterus.
19-**Quinolones**→damage of growing cartilage and arrest of growth.
20-**Griseofulvin**(antifungal).

N.B. 1-**Morphine** is not teratogenic but cause "fetal Addiction".
2-**Thalidomide** was used as anxiolytic / hypnotic and it caused"Amelia"= absent limbs and "phocomelia"= short limbs (thalidomide catastroph)

Prodrugs --→ Active drugs---→Active metabolite:

Prodrugs:

1 Inactive drugs converted in the body into active metabolites.
2 Activation usually occurs in the liver.

3 Chlorazepate is converted into active metabolite nordiazepam in the stomach by gastric acid.

EXAMPLES:

1. Dipivefrin (used in glaucoma).
2. Phenoxybenzamine (a-blocker).
3. Hexoprenaline (selective β2 agonist used in bronchial asthma, it is a non-catecholamine, converted to active metabolite by COMT).
4. Minoxidil (antihypertensive, converted into minoxidil sulphate).
5. Enalapril,Fosinopril,Ramipril (ACE inhibitors).
6. Proton pump inhibitors ,e.g; Omeprazole (in treatment of peptic ulcer).
7. Cortisone is converted into cortisol (=hydrocortisone).
8. Sulindac and Nabumetone (NSAID).
9. Ampicillin esters(=pro-ampicillins) as Bacampicillin,Pivampicillin,Talampicillin, converted into ampicillin in liver and GIT mucosa.
10. Chlorazepate (Benzodiazepine).
11. Propacetamol→Paracetamol, given by injection.

Acute toxicity of the drues:

Drugs causing toxicity	Signs and symptoms of acute toxicity (overdose)
1-*Amphetamine* 2-*Cocaine*	Hallucinations (shizophrania-like) – convulsions – hypertension - active mydriasis - coma and finally inhibition of R.C.
Ergot alkaloids (Ergotism) due to overdose of ergotamine or eating rye grains infected by ergot fungus.	Mania - hallucinations - convulsions - hypertension followed by hypotension - hyperpyrexia - bradycardia - nausea & vomitting - coma and finally inhibition of R.C.
Organophosphorus compund poisoning.	Bradycardia – hypotension – bronchospasm and increased bronchial secretion – excessive secretion – diarrhea – urination – miosis – skeletal muscle twitches followed by paralysis – convulsions – followed by coma and inhibition of R.C.
Atropine	Mania – hallucinations – convulsions – hypotension – tachycardia – passive mydriasis – dry hot skin (fkush & fever) – constipation – urine retention – finally coma and inhibition of R.C.
Competitive neuro - muscular blockers as *curare*	Apnea (due to paralysis of respiratory muscles) - hypotension - tachycardia - bronchospasm
Morphine (see CNS)	Coma + inhibition of R.C. + pin point pupil

1 The cause of death in acute toxicity is due to depression of R.C., i.e central respiratory failure.

2 Competitive neuro-muscular blockers cause peripheral respiratory failure but not central because they don't cross B.B.B

3 Organophosphorus compund poisoning cause both central and peripheral respiratory failure.

4 General rules for treatment of acute drug toxicity :

1. Stomach wash = gastirc lavage (if the drug is ingested**)
2. Care for respiration (endotrachial intubation – artificail respiration)
3. Antidote (if there is a specific antidote , e.g. atropine for organophosphorus poisoning , neostigmine for curare toxicity , physostigmine for atropine poisoning)
4. Symptomatic treatment (e.g. anticonvulsant as diazepam)
5. Increase (promote) renal excretion of the drug (by changing pH of urine : Acidification of urine in toxicity of basic drugs as amphetamine and ephedrine using ammonium chloride or ascorbic acid , Alkalinization of urine in toxicity of acidic drugs as *salicylates* (aspirin) using $NaHCO_3$. The drug should be completely or partially execreted in urine unchanged)

** In acute *morphine* toxicity stomach wash is performed although *morphine* is given by I.V. injection!! (see CNS)

N.B : The size of the pupil is a useful diagnostic sign.

Drugs that should never be stopped SUDDENLY (abruptly)

1. β-blockers : sudden withdrawal causes rebound tachycardia , arrhythmia , angina & even acute myocardial infarction
2. *Clonidine* (and other selective a_2-agonists) : sudden withdrawal causes "rebound hypertension" which is treated by giving *clonidine* again or by a_1-blocker ± β-blocker or *labetolol* but never use non-selective β-blocker alone
3. *Noradrenaline* IV infusion : sudden withdrawal cause "rebound hypotention"
4. Corticosteroids : sudden withdrawal after chronic use causes "Acute Addisonian crisis"

Drugs causing Gynecomastia :

1 *Digitalis* (due to steroid structure)

2 *Spironolactone* (due to steroid structure)

3 *Reserpine*

Due to decrease dopamine in CNS increase prolactin

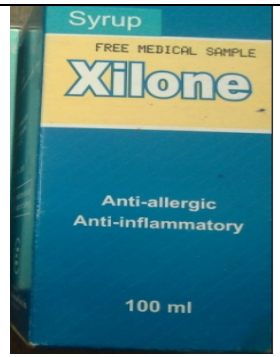
4 *a-methyl dopa*

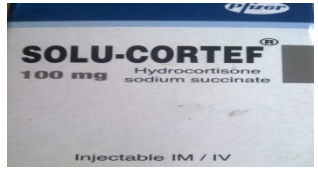
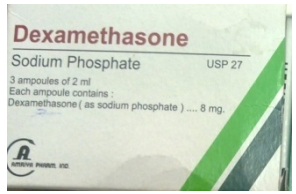
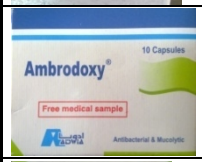
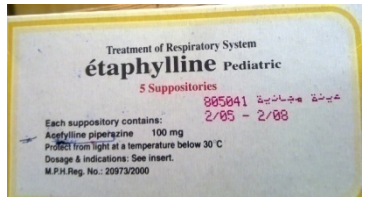
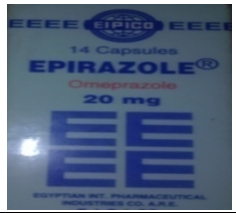
5 *Ketoconazole* (antifungal , decrease synthesis of androgens)

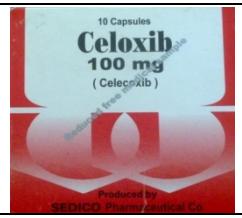
6 *Cimetidine* (H_2-blocker , used in treatment of peptic ulcer , causes anti-androgenic action)

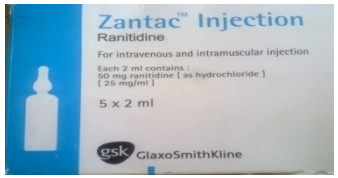
7 Estrogen (given to males for treatment of cancer prostate)

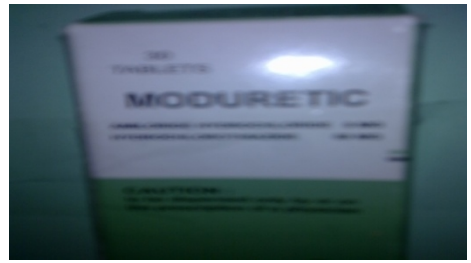
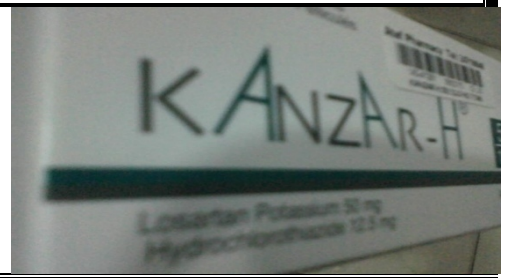
Practical

	Trade Name	Generic Name	Pharmaceutical Form	Indication	Side effect
1	**Sirdalude**	**Tizanidine** (Central muscle Relaxant)		**Painful Skeletal Muscle Spasm and Stiffness**	**C.N.S affection (Sedation & Drowsiness)**
2	**Afrin**	**Oxymetazoline**		**Nasal Decongestant**	**1- Long use** **→ Ischemia of nasal mucosa** **a- Loss of smell** **b- ↑ Infection** **2- Drowsiness in infants if have adult dose**
3	**Duvadilon**	**Isoxyprine Hydrochloride** (Uterine Relaxant)		**1- Dysmenorrhea** **2- Premature Labor** **3- Contraction Ring of Uterus**	
4	**Farcolin**	**Salbutamol** (β_2 agonist)		**1- Bronchial athma** (Acute attack & Status asthmaticus & Prophylaxis) **2- Peripheral Vascular diseases** **3- Premature Labor**	**(4 T + H)** **1- Tremors of SK.ms** **2- Tachycardia** **3- On CNS : Tension & Anxiety** **4- Tolerance** **5- Hypokalemia**
5	**Xilone**	**Prednisolone**		**1- Prophylaxis of Asthma after failure of other aerosol** **2-Maintainance therapy after I.V Hydrocortisone in status asthmaticus**	**1- Sudden Withdrawal** **→ Acute Addisonian Crisis** **2- Immunosuppressant** **3- Hyperglycemia** **4- Osteoporosis** **5- Myopathy** **6- Teratogenicity** **7- Peptic Ulcer** **8-Growth Retardation in Children**

	Trade Name	Generic Name	Pharmaceutical Form	Indication	Side effect
6	solucortif	Hydrocortisone Na succinate		1-status asthmaticus drug of choice 2-emergency acute Addison crisis 3-acute leukemia	As prednisolone
7	Dexamethazone (fortacortin)	dexamethazone		1-acute attack of bronchial asthma after hydrocortisone 2-prophylaxis of bronchial asthma	As prednisolone
8	muco	ambroxol		mucolytic in 1-Bronchial athma 2-bronchitis	
9	ambrodoxy	ambroxol			
10	Solvex (mucodyne)	CMC			
11	etaphilline	theophylline		1-acute attack of bronchial asthma after hydrocortisone 2-prophylaxis of bronchial asthma 3- IV in status asthmaticus	1-low therapeutic index 2-cns > headache,insomnia 3-cvs > tachycardia,palpitation 4-git > nausea vomiting
12	Epirazol Omipack omibral	omiprazol		1-peptic ulcer 2-zolliger Ellison syndrome 3-GERD	1- cns > headache,insomnia 2- git > nausea vomiting

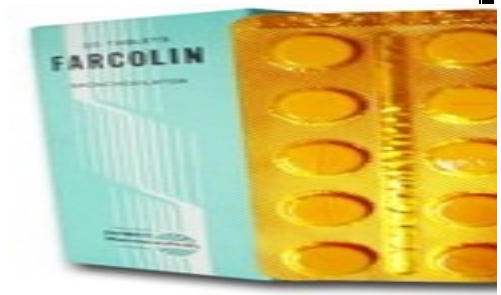
	Trade Name	Generic Name	Pharmaceutical Form	Indication	Contraindications
13	Jusprin	aspirin		1-Antipyretic 2-anti inflammatory (rheumatoid & rheumatic Arthritis) 3-Analgesic 4-antiplatlet (-- thrombo-embolic dis) 5-prophylaxis against cancer rectum & colon- alzhymer dis- cataract- radiation induced diarrhea	1-Acute toxicity 2-salsialism 3-git irrit. & ulcer. 4-allergy 5-hypoprothrombin > bleeding 6-reye's syndrome 7- teratogenecity > septal defect 8- idiosyncrasy>hemolyt. Anem 9-nephropathy 10- B.asthma 11- peptic ulcer 12- pregnancy
14	Aggrex				
15	Marcofen	ibuprofen		same as ketoprofen but not sk. Muscle relaxant as there is no chlorzoxazone	same as ketoprofen
16	celoxib	Celexoxib Selective Cox.2 inh.		1- anti inflammatory 2- anti rheumatic	1- hepatotoxicity 2- allergy 3- teratogenecity 4- idiosyncrasy 5- displace other drug
17	Valpam valium	diazepam		1-Anxiety 2-pre-anasthetic medication 3-status epilepticus drug of choice 4-anti spasticity 5-iv anesthesia 6-alcohol withdrawal	1-Allergy 2-ataxia 3-dependence 4-addiction day time sedation 5-affect mental&sexual function 6- + appetite
18	Carbatol tegretol	carbamazebine		1- mode stabilizer 2-partial&grand mal epilepsy 3- central diabetes insipidus 4- trigeminal neuralgia	1-Allergy 2-ataxia 3-anorexia 4-fluid retention 5- bone marrow depression 6- teratogenecity 7- hepatitis

	Trade Name	Generic Name	Pharmaceutical Form	Indication	Contraindications
19	peptoloc	pantoprazol		As omiprazole	As omiprazole
20	Zantac فيه فوار Rani	Ranitidine H2 blocker		1-peptic ulcer 2-stress& iatrogenic ulcer 3-upper git bleeding 4-GERD & hiatus hernia 5-preanasthetic medication	1-sudden stop > recurrence 2-git disturbances 3-allergy 4- ++serum creatinine 5- --hepatic blood flow
21	synchrogite	Dompridone Periph. & central antiemetic		1-dual anti emetic Except motion sickness 2-prokinetic agent	1-hyperprolactinemia 2-rare extrapyramidal manifestation 3-may cardiac arrhythmia 4- ++ absorption of drugs
22	primperan	metoclopramide			1-dizziness& nervousness 2-extrapyramidal manifestation 3- hyperprolactinemia 4- ++ absorption of drugs
23	flexofan	Ketoprofen + chlorzoxazone		1-Antipyretic 2-anti inflammatory (Arthritis, acute gout) 3-Analgesic 4- colics (dysmenorrhea)	1-gastric irrit. 2-displace other drugs 3-peptic ulcer & B.asthma 4-confusion & psychosis 5-teratogenic 6-bone marrow inh.
24	novalgin	New > metamizole Old > dipyrone		1-Antipyretic 2-Analgesic Severe resistant pain &fever	1-agranulocytosis 2- teratogenic 3- gastric irrit.& peptic ulcer 4-allergy 5-liver &kidney damage 6-bone marrow inh.

	Trade Name	Generic Name	Indication	Side Effects	Pharmaceutical Form
25	Lasix	frusemide	1. Edema(I.V in emergency &cerebral)(oral in refractory) 2. Hypertension(emergency , severe,resistant)&renal impairment 3. L.D in Acute renal failure 4. hypercalcemia	• <u>HYPOCALCEMIA</u> • Hypo(natremia,magnesemia& volemia) • Alkalosis • Hyper(glycemia,lipidemia& urecemia) • Allergy& GIT upset • Bone marrow depression • Fetotoxic&OTOTOXIC	
26	Aldactone	spironolactone	1. 1ry&2ry hyperaldosteronism 2. Refractory edema 3. Essential hypertention 4. Correct hypokalemia of diuretic 5. Substituation of diuretic when they are contraindicated	• Weak action &slow onset • <u>HYPERKALEMIA</u> • Antagonize digitalis & carbenoxolone action • Cns confusion&headache • Gynecomastia in male &hairsutism in female • Allergy& GIT upset	
27	Moduretic	Amiloride + Hydrochloro-thiazide	1. Edema(cardiac,renal,hepatic) 2. Hypertension(mild to moderate) 3. Nephrogenic diabetes insipidus 4. Premenstrual syndrome 5. Idiopathic hypercalcuria&osteoporosis	Similar to lasix but • No effect on K , H & uric acid • There is severe hypercalcemia • Severe renal failure in advanced renal diseases	
28	Knazar	Losartan	Same of captopril allowed in bronchial asthma & COPD	Same as captopril except dry cough Also contraindicated in bronchial asthma & COPD	

29	EFFOX (sublingual buccal)	Isosorbid 5 mononitrate	1. All types of angina either acute attack or prophylaxis 2. Acute M.I ,acute pulmonary edema ,coronary bypass,controlled hypotention in non cardiac operation(these effects by nitroglesrin I.V)	1. Headache ,flush& increase IOP 2. Postural hypotension +syncopal attack 3. Hypotension → reflex in sym. Tachycardia → short coronary perfusion #by CCB or B-blocker	
30	DINITRA (sublingual& chewable)	Isosorbid dinitrate	6. Cyanide poisoning (nitrates) 7. Biliary colic 8. Bronchial asthma 9. Contraction ring of uterus	4. Tolerance 5. Coronary dependence so sudden stop rebound V.C 6. Hypersensitivity 7. Met-Hb specially by nitrate 8. Nitrate ,nitrite +amino group (nitrosamine) carcinogenic	
31	ISO MAK RETARD	ISOSORPID DINITRATE	Same as 30	Same as 30	
32	CAPOTEN	CAPTOPRIL (ACE-I)	1. Hypertention with high rennin , H.F,diabetic nephropathy 2. H.F 3. Under trial in M.I	• Dry cough&1st dose hypotension • Hyperkalemia,proteinuria& neutropenia • Teratogenic 2nd&3rd trimester • Allergy &decrease taste • Contra indicated in bilat. Renal artery stenosis , B.asthma ,2nd&3rd trimester&COPD	

33	ATENO	ATENOLOL (B1-blocker)	1. Prophylaxis of angina pectoris 2. Cardiac arrhythmia	• Cardiac depression • G.I.T upset • Decrease organ bl. Flow except brain • <u>SYMPTMLESS HYPOGLYCEMIA</u> • Sexual dysfunction • C.I of B-blocker	
34	CARVID	CARVIDOLOL (V.D,B-blocker &antioxidant)	1. V.D (useful in ttt of emergency hypertension & pheochromocytoma 2. Antioxidant	Include side effects of B-blocker (as 6). &Side eff. Of alpha 1 blocker • Postural hypotension • 1st dose phenomena • Sexual dysfunction • Flush &nasal congestion	
35	CARDILOL	CARVIDOLOL (V.D,B-blocker &antioxidant)	See 34	See 34	
36	BETACOR	SOTALOL (non selective B-blocker)	Class 3 antiarrhythmic <u>NEVER USED WITH VERAPAMIL</u>	(side effect of B-blocker)	

37	VERATENSE (as isoptin)	VERAPAMIL (CCB)	1. Angina(ttt& prophylaxis) &cardiac arrhythmia 2. Acute M.I (cytoprotective) 3. Preserve ischemic myocardium (during surgery) 4. Arrhythmia (re-entrant PAT) 5. Hypertrophic obstructive cardiomyopathy 6. Premature labour &toxemia of pregnancy 7. Acute &chronic renal failure	• Headache & flush • May cause bradycardia ,Ht block &H.F • Hypotension • Constipation (verapamil) • Reversible liver impairment C.I with 1. Digoxin decrease renal excretion lead to toxicity 2. B-blocker lead to severe cardiac depression	????????????????
38	CARDIOMIL	VERAPAMIL (CCB)			
39	Delay-tiazem (as altizam)	DELTIAZEM (CCB)			
40	NORVASC (as alkapress)	AMLODIPINE	1. Angina 2. Hypertension 3. PVD	• Hypotension • Flush & headache • Tachycardia • Ankle edema NOT WITH NITRATE AS IT LEAD TO SEVERE HYPOTENSION	
41	FARCOLIN (as ventolin)	SALBUTAMOL (B2-agonist)	See 4	See 4	

42	**NU-SPASM**	**HYOSCINE**	**?????**	**??????**	
43	**DURACIN**	**DOXAZOSINE (alpha 1 blocker)**	**1. Essential hypertension 2. C.H.F 3. P.V.D 4. Pheochromocytoma 5. BPH**	**See alpha 1 blocker side effect In n.7 in C.V.S**	
44	**IPANTEN**	**PHENYTOIN Na**	**1. Antiepileptic (drug of choice in partial &grand) 2. Anti arrhythmic class 1B (vent. Arrhythmia with H.B) 3. Trigeminal neuralgia**	• **Confusion&hallucination** • **Gingival hyperplasia (irreversible)** • **Hairsutism** • **Hypersensitivity** • **Decrease insulin release** • **Teratogenic** • **Ataxia , nystigmus &vertigo** • **Agranulocytosis** • **C.I in petit mal** **Drug interaction with** **1. Folic acid (decrease it) lead to megaloblastic anemia 2. HME inducer lead to tolerance &increase metabolism of other drugs**